Page 23   lines 7, 8, 16, 18 change "remote data" to --data--;
             line 14   change "modified" to --conventional-- and change "code" to
--number--.
Page 24,   line 3   change "remote data" to --data--;
             line 14,   delete "real";
             line 15,   after "creating" insert --in the known prior art-- and after "wire"
insert --(electrical cable)-- and change "system with the microproces-" to --means to--;
             line 16,   change "sor" to --the-- and change "system in the known prior
art" to --means--;
             line 17,   change "of the" to --and-- and change "communicating and" to
--communicating--;
             line 18,   change "detecting system" to --sensor--.
Page 25,   line 1,   change "approaching" to --accessible--.

In the Claims:

Cancel claims 38-48 and substitute new claims 49-58 as follows:

49. A method for counting and measuring particles illuminated by a light beam, said method comprising the steps of:
        providing a wireless communicating remote particle detecting system, including a particle detecting means, having a particle monitoring region and including a light detecting means;
        sensing by said light detecting means a light created by an intersection of said light beam with said particles at a point within said particle monitoring region and providing an output which is effectively indicative of a size of said particles;
        processing said output by a detected signal processing means of a signal processing system of said wireless communicating remote particle detecting system;
        forming in said signal processing system of said wireless communicating remote detecting system a data, containing an information about a quantity and said size of said particles;
        conversing said data, containing said information about said quantity and said size of said particles, to a form acceptable for a wireless communication of said wireless communicating remote particle detecting system with a wireless communicating data processing and control system;
        wireless communicating between said wireless communicating remote particle detecting system and said wireless communicating data processing and control system;
        processing the wireless received signals, characterizing said data containing said information about said quantity and said size of said particles, by said wireless communicating data processing and control system.

50. The method of claim 49, wherein said wireless communication means of said wireless communicating remote particle detecting system and a wireless communication means of said wireless communicating data processing and control system provide a two-way wireless communication by a transmitting-receiving means of said wireless communication means of

said wireless communicating remote particle detecting system via an aerial means of said wireless communication means of said wireless communicating remote particle detecting system and by the transmitting-receiving means of said wireless communication means of said wireless communicating data processing and control system via the aerial means of said wireless communication means of said wireless communicating data processing and control system.

51. The method of claim 50, wherein said two-way wireless communication provides:
a transmitting of the control signals from said wireless communicating data processing and control system to said wireless communicating remote particle detecting system;
a receiving of the control signals by said wireless communicating remote particle detecting system;
a transmitting of said data, containing the information about particle quantity and size, from said wireless communicating remote particle detecting system to said wireless communicating data processing and control system, and
a receiving of said data, containing the information about particle quantity and size, by said wireless communicating data processing and control system.

52. An apparatus for counting and measuring particles illuminated by a light beam, said apparatus comprises:
N=1, 2, ..., i, ..., n, wireless communicating remote particle detecting systems, each of which comprises a wireless communication means, including a transmitting-receiving means, comprising a transmitting means and a receiving means, an aerial means, a particle detecting means, including a light detecting means, a signal processing system and a conversion system, converting a transmitting data containing an information about a quantity and a size of said particles to a form acceptable for a wireless communicating means and converting a received control signals to a form acceptable for processing by said signal processing system;
at least one wireless communicating data processing and control system, comprising the wireless communication means, including the transmitting-receiving means, comprising the transmitting means and the receiving means, the aerial means, a microprocessor system, including a terminal means, a microprocessor means and a conversion means, converting the transmitting control signals to a form acceptable for the wireless communicating means and converting the received data to a digital form acceptable for processing by said microprocessor system.

53. The apparatus of claim 52, wherein said terminal means includes at least one of a displaying means, a floppy disk means, a compact disk means, a printing means and a control panel.

54. The apparatus of claim 52, wherein said particle detecting means of each of the wireless communicating remote particle detecting systems includes a tubular means, coupling a detection means and an environment assaying control means.

55. The apparatus of claim 52, wherein said conversion system of each of the wireless